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AUTHOR	Higgins, Adrian T.
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ABSTRACT

This Federal Library and Information Center Committee (FLICC) Forum on Federal Information Policies focused on the impact of OMB (Office of Management and Budget) Circular A-130, which revises administration policy on information dissemination and the use of automated systems by federal agencies. Introductory remarks by James P. Riley, Kent A. Smith, and William J. Welsh were followed by the keynote speech by George E. Brown, Jr., who opened the morning session with a discussion of Circular A-130 and the transformation of society through developments in the information field. Continuing the theme of information policies and public access, the session included speeches on executive branch initiatives on policy information (Franklin S. Reeder), freedom of information concerns (Harold C. Relyea), the interests of the Office of Technology Assessment (Frederick W. Weingarten), and Circular A-130 and technology-based issues (Thomas Giammo). The afternoon session, which focused on the theme of federal electronic information systems and access, included a description of the National Library of Medicine (NLM) automated system, MEDLARS (Donald A. B. Lindberg), an explanation and demonstration of the Electronic Data Gathering, Analysis, and Retrieval (EDGAR) system of the Securities and Exchange Commission (SEC) (Amy L. Goodman), a discussion of the impact of federal electronic information systems (Robert Gellman), and statements about the concerns of the information industry (David Y. Peyton) and information users (Eileen D. Cook). (KM)

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FICC

FEDERAL INFORMATION POLICIES

Information Access

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
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Federal Library and Information Center Committee

THIRD ANNUAL FORUM
FEDERAL INFORMATION
POLICIES:

Their Implementation and Implications for Information Access

A Summary of Proceedings
Prepared by
Adrian T. Higgins

Library of Congress

Washington 1986

In its tradition of providing leadership when issues affecting information policy emerge, FLICC sponsored this third annual Forum on Federal Information Policies at the Library of Congress on February 12, 1986.

As perhaps a measure of the significance of the issues, FLICC Executive Director James P. Riley, in requesting that the forum be videotaped, said the discussions should be preserved as a historic record for future generations.

The Library of Congress has added the videotape to its collections. The tape, "FLICC Forum: 2–12–86" (Shelf nos. VBD 8807–8812), may be viewed by appointment, made a week in advance, in the Motion Picture, Broadcasting and Recorded Sound Division, LM 336, in the Madison Building of the Library of Congress.

Issues Statement

The advent of computers and other high technology to collect, store, and transmit information has caused a fundamental change in how we communicate with each other. Nowhere is this more keenly felt than in the federal government, the largest single producer, consumer, and distributor of information in the United States. The question of how federal agencies should employ this technology is more than just an esoteric consideration; as one information policy expert noted, "information is the currency of democracy."

Just as the federal government stands on the threshold of large-scale conversion to automated files, it finds itself at a more dubious juncture, one of trying to reduce a multi-billion dollar budget deficit that threatens the country's economic future. Budgetary constraints are playing a predominant role in key decisions surrounding electronic information systems in the federal government. Public debate on these issues has been galvanized by two recent developments.

- On December 12, 1985, the Office of Management and Budget (OMB) issued a final version of Circular A-130, which established policy for the management of federal information resources. The directive was generally applauded because for the first time it assembled in one document broad government policy on information systems and information technology. But, at the same time, it raised such controversial issues as user fees for information, private sector competition, and basic questions of access to information.
- A congressional subcommittee convened hearings in 1985 to examine electronic collection, storage, and dissemination of information by federal agencies. That inquiry was triggered by a growing number of agencies turning to automated systems. Congress is seeking answers to a number of questions raised by the switch to electronic files. What

will its effect be on access to information? Who will pay for the access? Who will control the information?

The Federal Library and Information Center Committee (established in 1965 as the Federal Library Committee) is an interagency committee serving federal library and information centers worldwide. Where the formal committee, FLICC, focuses on policy issues, its operating network, FEDLINK, administers information services contracts on behalf of the information community in the federal sector.

Some two hundred federal library and information center managers, public and private librarians, archivists, and other information specialists gathered February 12, 1986, at the Madison Building of the Library of Congress for the third annual Forum on Federal Information Policies given by the Federal Library and Information Center Committee. They heard from a diverse and articulate group of information experts, including representatives of Congress, the administration, and public and private sector information users.

The morning session, introduced by FLICC Executive Director James P. Riley and Kent A. Smith, Deputy Director of the National Library of Medicine, focused on the impact of OMB Circular A–130, which revises administration policy on information dissemination in the electronic age.

The afternoon session featured a discussion and demonstration of automated systems already in use in the government.

Also taking part in the introduction, in his capacity as acting chairman of FLICC, was William J. Welsh, The Deputy Librarian of Congress. The forum was held at a time when the first round of cuts under the Gramm-Rudman-Hollings Balanced Budget Act was on everyone's mind, including an $18 million reduction that threatened to impair research services at the Library of Congress. Welsh told the assembled federal librarians that "we have got to rise above the current problems we all face and find a way to make our work known to the Congress and to the nation." This symposium, he said, "gives us an opportunity to do that."

The Keynoter

In introducing the first guest speaker of the day, Kent A. Smith noted the forum had been convened on Lincoln's birthday and that "in the spirit of good old Honest Abe," forum organizers had chosen a keynote

speaker of impeccable integrity: California Congressman George E. Brown, Jr.

Brown was first elected to the U.S. House of Representatives in 1962, and as a member of both the Science and Technology Committee and the Permanent Select Committee on Intelligence, he has taken a keen interest in furthering scientific research.

In his address, Brown welcomed OMB Circular A–130 as a badly needed statement of policy on how federal agencies should react to the electronic age, but said it also contained a troubling provision that typified a broader government philosophy of withholding information.

Brown set the tone for the session by telling the audience that "we are seeing a transformation of an entire society as a result of developments in the information field."

He said efforts were made years ago to mold policy on scientific and technological issues within the executive branch, but that function has since been "downgraded." (The Science Policy Act of 1976 installed a presidential advisor on federal science policy but the advisor has often found himself thwarted by the competing interests of various federal agencies.) Consequently, the administration has been left with "a policy vacuum" until OMB Circular A–130 was issued. Brown told the assembled federal librarians that "you may be the nearest thing we have to an institutional capability to look broadly at the problem."

He also criticized Congress, saying legislators have introduced many bills related to information issues (more than 280 since the Ninety-Fifth Congress) and in doing so have followed an uncoordinated "piecemeal" approach. "This rash of information systems should not be allowed to grow unsupervised and uncontrolled," he said.

Brown argued that the OMB directive, while flawed, "should be welcomed and applauded" for providing the policy direction

that in the past has been "sorely lacking." He said the final OMB circular, issued December 12, 1985, contained significant improvements over a more controversial draft proposal released the previous March. "I am pleased to see that a number of changes have been made in the policy as a result of congressional and other concerns – including those of the FLICC Committee," he said.

Still, Brown said, the circular raised concerns about an undue restriction of public information.

He said the government, through a number of laws, has attempted to control information release since World War II, and the current administration continues in that direction. "Although Congress definitely shares a responsibility for several unfortunate policies regarding information dissemination, this administration has been particularly enthusiastic in enforcing them."

Present laws effectively restrict the flow of information from government agencies and allow the government "to confiscate or try to control information that has been generated by private citizens." Both conditions "are seriously detrimental to our national welfare in general, and to scientific progress particularly."

He said that scientists who attempt to meet with counterparts from abroad – including Eastern bloc nations – to discuss new research in certain fields run the risk of criminal sanctions for violating export regulations.

Brown said successive administrations have failed to distinguish between highly technical data with direct military use and basic science or theory. Further, the knowledge that a certain technology exists is all the information that other nations need to develop the same technology. The Manhattan Project was one of the most tightly classified projects in U.S. history, he said, yet the Soviet Union developed its own atom bomb just five years after Hiroshima. He said the

only secret was whether it would work, and "we gave that away."

Similar efforts to shroud the development of the hydrogen bomb in secrecy proved equally fruitless, he added.

Instead of making things difficult for foreign governments, attempts to control access to information "may do more to hurt our own scientific innovation, development, and renewal," he said.

Brown said the OMB circular contains a disturbing provision that classifies as *sensitive*—and thus secret—information whose disclosure "could adversely affect the ability of an agency to accomplish its mission."

"Former officials of the EPA believed that information about their conduct of agency business—which revealed that some of them had been engaged in activities later determined to be illegal—'adversely affected' their ability to accomplish their missions," he said. The circular, he said, may contain controls not allowed by law.

Brown called to mind the views of nineteenth-century political philosopher John Stuart Mill, a champion of free speech. "Mill's view—still correct today—was that we only make progress in scientific, moral, and other areas of inquiry by having a marketplace of free ideas, where ideas can clash. The truth will emerge, we will learn from one another, and intellectual and commercial progress will result."

He said federal agencies control considerable information that would give the public a chance to assess the performance of those agencies. The provision in the circular giving agencies powers to withhold information they regard as "sensitive" should be opposed, he said. He urged forum participants to speak up about this and other related issues.

"A coordinated, well-thought-out information network, under reasonable policy controls, will be the heartbeat of our society for generations to come," he said.

Smith then introduced Robert Lee Chartrand, Senior Specialist in Information Policy and Technology for the Congressional Research Service, Library of Congress. Chartrand is a leading figure in government information circles and has served as an advisor in various levels and branches of government, as well as private industry.

Chartrand presided over the rest of the morning session and, commenting on FLICC's work, said the committee plays a critical role in society that "simply cannot be overstated." The committee's annual forum, he said, was one of the few stable mechanisms to address information policies of the government.

Executive Branch Initiatives

Chartrand then introduced Franklin S. Reeder, Deputy Chief of the Information Policy Branch of the Office of Information and Regulatory Affairs, Office of Management and Budget. Reeder spoke about executive branch initiatives on policy information, particularly as articulated in Circular A–130.

Reeder worked closely with colleague J. Timothy Sprehe, a policy analyst in OMB's Office of Information and Regulatory Affairs, in writing the OMB circular, and, as if to acknowledge its unpopularity in some quarters, began his address by joking that he was "delighted to be here to see so many familiar faces, and even some friends."

He focused his address on the history of the circular and the concepts and principles that underpin it.

He said the circular was "not an inconsiderable accomplishment" and that its development as a policy document on government information "would not have occurred without the physical and intellectual discipline Tim brought to the process."

The circular grew out of the 1980 Paperwork Reduction Act and an initiative from

the Assistant Secretaries for Management of federal departments to examine previous policy directives addressing government information, he said.

The 1980 act directs government agencies to be efficient, effective, and economic in their handling of information.

Reeder said OMB first announced in 1983 that it intended to develop a circular addressing information policy, and in March 1985 it issued the first draft. "We were really dealing with two very different problems," he said. One was the management of resources used to produce information, including computer equipment; the second was the management of the information itself.

"Several points, we thought, were rather important," he said. The first consideration was that information is a resource and has the same characteristics as other economic resources: cost of production, value to users, and a market for it. Another factor, he said, was that information has its own life cycle. The circular also acknowledged "a fundamental difference" between access to information and dissemination of it, Reeder said.

Access, essentially a passive act, means making information that belongs to the government available to the public and other government agencies, he explained. Dissemination, in contrast, requires actively distributing information.

He noted statutes like the Freedom of Information Act and the Privacy Act require the release of information, as do legally mandated agency programs. "A-130 does not contradict these obligations," he said.

What it does do, he said, is recognize that scarce government resources are used to distribute information "and there needs to be rational decisions for determining when and how that information ought to be disseminated."

The Internal Revenue Service must give the public information on how to file tax

returns for the efficiency of the agency, for example, said Reeder, but to what degree should the agency help individuals in preparing returns?

Reeder acknowledged that the draft circular "created a great deal of consternation." It contained sections that were ambiguous and led to misunderstandings; in addition, "there were some serious gaps."

Still, an underlying principle remained, he said, that OMB had to take into account the extent the private sector could or already was providing information service that duplicated an agency's requirements. "What we are saying, in essence, is that government probably ought not to be in the newspaper business," he said.

OMB amended the circular after receiving comments on it from others. The directive was changed to include a reminder to agencies that they are obliged to make their publications available through the Federal Depository Library System. Also, government agencies must give public notice if they plan to end or substantially modify significant information dissemination activities.

That warning, Reeder said, will give those affected a chance to lobby against changes or will "energize" the private sector to fill the vacuum.

New initiatives by the government to cut spending to reduce the budget deficit bring a new urgency to the issue of relying more on the private sector for information services.

Freedom of Information Concerns

Chartrand next introduced Congressional Research Service colleague Dr. Harold C. Relyea, CRS Specialist in American National Government. Relyea is also an author, lecturer, and advisor on freedom of information matters.

Relyea told the audience that the OMB circular was the latest in a series of clashes between Congress and the executive branch

since the Freedom of Information Act was adopted almost twenty years ago.

The electronic age, he added, presents the government with a chance to give the public better access to information, yet the new OMB circular raises concerns that technology will be used to restrict it.

Relyea, an acknowledged expert on freedom of information issues, began his address by noting wryly that he last came to the Mumford Room for a forum on George Orwell.

"Information is the currency of democracy," he said. James Madison saw this clearly, Relyea noted, and Madison told his contemporaries that "knowledge will forever govern ignorance, and people who mean to be their own governors must arm themselves with the power which knowledge gives."

Relyea said the United States set an example to the world when, in 1966, it enacted the Freedom of Information Act, giving citizens a presumptive right to government-held information, listing specific exemptions, and a procedure allowing the judiciary to adjudicate disputes over access.

Today, a dozen nations have similar laws—legislation that stands as a symbol of open government and, as important, an effective way of getting information that is held by the government.

In practically all of the nations with FOI acts, he said, there has been a clash between lawmakers and the bureaucracy over the enactment and administration of the legislation.

He quoted sociologist Max Weber, who said that "every bureaucracy seeks to increase the superiority of the professionally informed by keeping their knowledge and intentions secret."

"For almost two decades," noted Relyea, "members of Congress have experienced something less than enthusiasm for the FOI Act on the part of the executive branch."

For example:

☐ No agency supported the legislation when it was first considered by Congress.

☐ The president was a reluctant signatory to the law.

☐ The attorney general issued a biased interpretation "against the true spirit of the law."

☐ Government departments failed to follow seriously the law's requirements by not devoting adequate resources to its administration.

When the law was overhauled in 1974, agencies withheld their support for the reform measure and the president tried to veto it. Two years earlier, a House oversight report concluded that "the efficient operation of the Freedom of Information Act has been hindered by five years of foot-dragging by the federal bureaucracy."

As a result, Congress has become sensitive to—"if not suspicious of"—administration efforts to modify the FOI law.

That is not to say that members of Congress do not support refinements in the law: legislators are moving to update the basic nuts and bolts of the legislation as well as address the implications of the electronic age regarding it, Relyea said.

Among improvements in the law that Congress is now exploring are different requester fees, strengthened fee waiver standards, increased security of law enforcement files, increased sanctions for arbitrary and capricious record withholding, and changes in response deadlines.

Congress is also interested in the impact of computers and other technology on the FOI Act. Despite significant capital costs, computer systems promise greater efficiency, greater agency compliance with the spirit of the law, and "an opportunity to expand the availability of information and to make it more useful," he said.

But Congress is also concerned that information stored electronically may be less

accessible, and the new OMB circular raises "some new concerns about agency information collection, maintenance and dissemination practices," Relyea said.

"The circular has a significant bearing upon the FOI Act because it may be a means for determining the kinds of information that the agencies can possess and also the medium in which it shall be collected, maintained and disseminated."

OMB will have to convince Congress that the directive does not counter the FOI Act, he said. It could have that effect, he argued, if agencies must comply rigidly with the circular's requirement that they only generate information necessary to perform their mission. Apart from the FOI Act, the computer age raises additional concerns about government information policies, including the impact on libraries and archives, if the government turns to replacing paper documents with electronically stored material.

Relyea also warned that, in the age of government austerity, "freedom of information might be sacrificed in the holy cause of efficiency, economy, and budget balance."

He said the cost of administering the FOI Act is around $50 million a year—"considerably less than the cost of government public relations and self-promotion programs," which cost an estimated $1 billion.

"It is less expensive to provide the public with the information it seeks than it is for the departments and agencies to dispense what they determine people should know," he said.

In many ways, he said, the FOI Act "sustains our form of government and helps the citizenry to keep it."

Office of Technology Assessment Interests

Chartrand next introduced Frederick W. Weingarten, Program Manager of Communication and Information Technologies at the

Office of Technology Assessment. The office prepares detailed studies for Congress, and Chartrand noted that Weingarten has authored several important studies on the effects of technology on society.

Weingarten said new technology has thrown out of balance traditional policies dealing with government-held information, and society has to make a fundamental reassessment of "what we want out of this technology and our government."

His agency is small, relatively young, and one of four analytical support agencies of Congress. It examines how changes in technology affect the kinds of policy decisions made by Congress.

This is done primarily through detailed, lengthy studies that typically take a four-member team working with consultants two to three years to produce. OTA, he said, was about to release two reports dealing with information policies—one on government information technology and a second reevaluating the nation's copyright laws. In its work, OTA looks at three areas governing information: basic policy, the issues surrounding the use of government information, and technical issues ranging from compatibility between various computer systems to the effects of cathode ray tubes at the workplace.

He said there are four "clusters of values" affecting government information policy. The first is that information is a public good and that the free flow of information is essential to maintain a democracy. Second, information is an increasingly valuable commodity. Third, government must secure certain files to protect an individual's privacy. Fourth, law enforcement and national defense agencies must gather information to protect citizens.

Often the interests of one value system conflict with another— for example, First Amendment rights versus national security needs—and so public information issues "must lie as tensions along or between those

points," said Weingarten. What new technology has done, he argued, "has thrown those balances out of whack."

The government must look at a number of consequential questions, including whether the private sector can disseminate information better and what the broad civil liberties issues are. "Technology is upsetting power balances between government, large organizations, and individuals. They need to be assessed and restruck," he said. Protections from illegal wiretapping for example, have been overtaken by advances in wiretapping technology.

Federal agencies have to understand the importance of what is happening. "Information is becoming as essential an infrastructure in our society as the railroads were in the previous century," he said. "If that assertion is true," he argued, "it means that how we develop this infrastructure, the policies we set for its development, will have as much impact on our economic and social strength as a nation in the next century as the railroads in the previous century."

Yet, he suggested, efforts to address these fundamental questions are presently scant and uncoordinated.

The issues will not be resolved satisfactorily, he said, "until we understand much better what we want out of this technology and our government and how those important balances are to be struck."

Technology Based Issues

The last speaker of the morning was Thomas Giammo, Associate Director of the General Accounting Office's Information Management and Technology Division.

Giammo agreed with Weingarten that the issue goes deeper than the question of how to deal with computerized documents. Rather, he said, the debate should boil down to the fundamental issue of access to government information.

(Giammo said GAO, an investigative agency for Congress, "speaks when it is spoken to" and that his views were his own, and not the agency's.)

He welcomed the OMB circular as a policy document, but said it embraced the shortcomings of previous directives. His remarks were dominated by a highly critical account of what had happened at the Patent and Trademark Office. The PTO's switch to electronic files had been done by the letter of the law, but the result, Giammo said, was a "monster" that denied meaningful electronic information to the public while giving selected companies that computerized the files a virtual monopoly to market the information.

Giammo told the forum participants that "we do ourselves and the country a disservice" by regarding the advent of computerized documentation as a technological issue.

"Information technology is providing new contexts in which old policy has to apply," he said.

The new technology has changed "all the tacit assumptions" of government information, he said, including the presumption until now that documents come in one form—on paper.

Like others who criticized specific provisions in the OMB directive, Giammo said Circular A–130 itself was "overdue for many years." He especially congratulated A–130's authors for their inclusion of Appendix IV, which gives an analysis for the underpinning of the policy. Appendix IV provides a "terse" rationale that in most cases makes it clear what the intent of the policy is. "It also makes it easy to pick flaws in it," he said, drawing a chuckle from the audience.

He added, however, that the fact the document was needed showed a failure of sorts. "The need for such policy arises," he said, "when it is not clear how basic principles apply."

In A–130, for example, OMB based its policy regarding user fees on an earlier circular—A–25. Yet A–25 was written before the dawn of the technological age; it addresses the economic value of government-owned property and not its intrinsic worth, and has in mind such commodities as rights to cut timber on federal land, and patent grants.

A–130 contains several other major flaws, he argued. First, it fails to make the key distinction between the form and content of information, even though electronic information can be much more useful than paper documents. That policy weakness, found also in the Freedom of Information Act, "makes difficult one's access to certain kinds of information that otherwise would be much more easy to obtain," he said.

Second, the circular "makes worse a very narrowly construed obligation" of the federal government to disseminate information, he said. "My reading of it [is that it] actually forbids the voluntary dissemination of information by some agencies under certain circumstances."

Third, A–130 has an overly broad ban on public agencies repeating private sector information services. "They have an absolute prohibition—not just in those cases where a better means of dissemination occurs," he said. And when it comes to an agency providing information, the circular perpetuates rather than clears up confusion over user charges, he added.

Giammo said when GAO audited the Patent and Trademark Office, it found that there were major problems with the agency's conversion to electronic file keeping, but that those problems were created by reliance on policy weaknesses found in such earlier guidelines as the Freedom of Information Act and A–25.

He said there was never a question that PTO managers acted in good faith. "The

question was whether what they did was good, or not good," he said.

As technology became available, PTO decided to automate its files as part of a government mandate for an efficient, effective operation. But, Giammo noted, the agency decided that if a small group of private firms would computerize the files, PTO would give them exclusive rights to market the information without competition from the agency. In the end, PTO crippled its software so that the public could not gain any advantage in reading electronic documents, and decided to resist all Freedom of Information Act requests for documents in electronic form. The agency also charged anyone who wanted a computer tape of filings $40,000 per copy – seven times what it had charged before.

How could this happen? First, Circular A–25 calls for agencies to price government-held property – in this case information – at its market value, not at its cost, he said. Second, the Freedom of Information Act fails to spell out the form released information must take.

Giammo said PTO officials allowed one element of bad policy to work in conjunction with another bad policy to create "one horrible example" of how things can go wrong. They used the Freedom of Information Act to furnish the public with inferior information and Circular A–25 to charge prohibitively expensive fees that perpetuated the private vendors' monopoly, he said.

There was "a plausibility" to the agency's arguments, he added, but "the result is a monster."

The new OMB directive leaves intact the rationale PTO followed, Giammo argued. "All those pillars . . . remain standing under A–130."

Federal Electronic Information Systems and Access

Kent A. Smith, who presided over the afternoon's panel of speakers, said that as

government policy makers began to look at electronic filing systems, it became apparent that collecting information was just "one side of the equation." The other element—dissemination—generated additional questions, Smith said. Ensuring public access to information "is an important goal to all of us, but I suspect we may debate the methods to achieve it," he said.

Forum organizers hoped that "by bringing concerns into the open, we may be able to develop some answers, or at least come away with a better understanding" of the issues, Smith added.

He then introduced his "boss"—National Library of Medicine Director Dr. Donald A.B. Lindberg.

NLM MEDLARS System

Forum participants had earlier heard of the great capabilities and benefits of electronic information systems, but only in an abstract sense. In describing the National Library of Medicine's MEDLARS system, director Lindberg gave the audience specific examples of how his automated library can help doctors faced with life-or-death decisions, aid cleanup crews protecting communities from chemical spills, or assist in the fledgling science of DNA research.

But to protect the value of the library, Lindberg argued, you have to assure the accuracy of its data, and that may not be possible if portions of the system are turned over to private sector control.

The NLM traces its roots back to 1836 and a shelf of medical books in the Office of the Surgeon General of the Army, Lindberg said. Today, it is "by far the biggest biomedical library in the world," he said.

Lindberg's predecessors began their efforts to computerize the library in 1960. It was not an easy task—in the age of computers, "1960 was reasonably early"—but by 1964 the NLM's first computer-generated library index

was available. Two decades ago, computerized searches for information in the MEDLARS system took "a couple of weeks," Lindberg noted.

Today MEDLARS gets 3 million inquiries a year and can handle requests from 190 users at once. Half the inquiries have to do with patient care, he said.

Of the 50,000 periodicals in the literature of medicine, approximately 3,200 are used in the NLM electronic system. MEDLARS consists of 30 data base systems, from journal article references to files on chemistry, toxicology, and cancer research and treatment.

He said he was particularly proud of the library's toxicology data base, which was established in the late 1960s with the help of the Food and Drug Administration, the Centers for Disease Control, and, in the past five years, the Environmental Protection Agency and its Superfund program.

The system allows experts dealing with hazardous chemical spills to call the computer from the accident site and get information on how best to handle a disaster.

Trucks crash daily on the Capitol beltway ringing Washington, D.C., for example. "Sometimes they have innocuous substances in them, sometimes they don't," he said. Such accidents happen all over the country, he added.

By reaching the NLM computer, experts at chemical spill incidents can pinpoint which chemicals they are dealing with (800,000 chemical names are understood by the system). The accident workers can also learn the characteristics of a chemical—whether its fumes are heavier or lighter than air, for example—and determine what would happen if it is mixed with another substance. The computer, Lindberg said, can provide information on how best to neutralize or remove toxic chemicals and can help the human expert decide whether nearby communities need to be evacuated.

"It's all very real," he said. "That's a classic area where it's unreasonable to expect private companies to develop these data bases. Either it's done by a public agency or it isn't going to be done," he said.

Referring to the OMB circular, he said the worst parts were removed in the final version, and he noted that the circular's policy that user fees be based on the marginal cost of accessing the information was "quite sensible—that's how our services are priced."

He questioned the wisdom of turning control of certain information services over to profit-making firms, however.

"I have to question if it is in society's best interests if information on drug effects, drug side effects [or] drug reactions must be sold to the highest bidder [and] denied to a patient who has run out of insurance," he said.

NLM's files are available to government agencies, universities, and private companies, but the data bases are still controlled by NLM. If that were lost, there are no guarantees that all information vendors would have the resources to make sure the information is corrected or updated, he said. Typographical errors could lead to patients getting the wrong, and possibly lethal, doses of medicine.

If the electronic library systems are not properly funded and care is not taken in quality control, "patients will pay the real price," he said.

The SEC's Experience with EDGAR

Following Lindberg's speech, Smith introduced Amy L. Goodman, Associate Director, EDGAR, Division of Corporation Finance, Securities and Exchange Commission.

The commission was one of the first federal agencies to experiment with an electronic information system, and Goodman provided both an explanation and demonstration of what the commission's system could do.

For the Securities and Exchange Commission, its Electronic Data Gathering, Analysis, and Retrieval System (EDGAR) will give the agency an important tool in fulfilling one of its primary missions—to provide corporate information to investors.

Currently the commission handles more than 7 million documents annually, and the switch to electronic files processing and dissemination means investors will get key information sooner. In a field where timing is crucial, EDGAR may make America's capital markets "far more efficient," said Goodman.

The SEC was formed in 1933 as part of the New Deal to regulate the securities markets and provide information to investors.

Companies often use word processors to prepare filings for the SEC and submit them in paper form to the agency, which would then convert them to microfiche files. "Some private vendors would take this information and rekey some of it" and sell access to it, Goodman explained.

It occurred to the commission in the early 1980s that new technology could be used "to further the mission" of the agency.

After a study of the idea, the commission established a pilot program for the EDGAR system, working with a group of companies who agreed to submit electronic filings either over the telephone or by computer tapes or diskettes.

It was important that the SEC computer accept electronic filings in different formats to take into account the variety of computer systems used by private companies, she noted.

The pilot program began in 1984, and since then hundreds of corporations, financial institutions, and utilities have submitted electronic filings as part of the experiment. The SEC hopes to make EDGAR fully operational beginning in 1986.

A major question surrounding EDGAR, she acknowledged, was financing. One esti-

mate has put the cost at $70 million. The agency initially decided that a contractor should provide the hardware and software necessary for EDGAR in return for being able to sell access to the data, she said. The SEC later modified that, saying that the private contractor should underwrite receiving and disseminating the corporate disclosures in return for selling access to the data base. The agency is looking to Congress to fund the cost of its internal processing system.

The commission still makes paper and microfiche files available to the public and, since EDGAR went on line, has installed computer terminals for free public use at SEC reference rooms in Washington, New York, and Chicago, Goodman said.

While all the funding issues for EDGAR have not yet been resolved, Goodman said, one thing is clear: the electronically stored corporate filings are an extremely valuable commodity. "There's a tremendous amount of analysis done of companies' financial statements" in making investment decisions, she noted. In the case of mergers, where two firms may be competing to take over a third, information "is valuable the sooner you can get it," she said.

"Investment decisions involving millions and millions of dollars are made every day based in part on the information acquired in the filings," she said.

Goodman then demonstrated the EDGAR system, using a projector to display computer terminal images for the forum participants.

She called up a filing by Pacific Bell and showed how an SEC examiner would use the system to check the document. The computer offers an electronic file folder containing all correspondence related to a particular filing and even sets aside the bottom of the screen to allow an examiner to make notes.

Impact of Federal Electronic Information Systems

When the lights came back on, it was the turn of Robert Gellman to address the forum. Gellman is counsel to the House Subcommittee on Government Information, Justice, and Agriculture.

(Gellman said he was expressing his own views and not necessarily those of subcommittee members.)

He said Congress sees the emergence of electronic information systems in federal agencies as an opportunity to make information more available and useful to the public, but legislators also have concerns that agencies will abuse the new technology.

Among the fears, he said, were that government departments would restrict access to data to silence agency critics, control data for political purposes, and regard data banks as a method to fund financially strapped agencies.

The subcommittee, chaired by Oklahoma Congressman Glenn English, held three days of hearings on the issue in 1985. The inquiry was spurred after several federal agencies began moving to electronic information systems at a time when issues surrounding their use had not been addressed or resolved.

Gellman said the subcommittee is not opposed to agencies going to automated systems. "Our interest is a positive one," he told the audience. Electronically stored information has the potential to make government agencies more efficient, and their data easier to get and more useful.

A key issue the subcommittee is addressing is the control of the information, Gellman said. Electronic systems give an agency the "potential to increase its control over data," he added.

"In the past, anyone with a Xerox machine or a printing press could redistribute" documents in an agency's files. "That created

a check on the agency's ability to control its own data," he said.

He noted a recent newspaper article that explained that in the Soviet Union access to photoduplication machines is tightly controlled. "The Russians have learned that one way to control information is to control technology," he said. There are probably more photoduplication machines within a two-mile radius of the Library of Congress than in the entire Soviet Union, he added.

Another concern is that an agency might control data by charging high user fees to distribute data that has "already been compiled at taxpayer expense." Further, an agency "could use monopoly power to control information for political purposes," deciding that "we are [only] going to let the people we like use it."

The FOI Act and the absence of government copyright work together to prevent an agency from controlling use of its information. Yet, he argued, the National Library of Medicine licenses copies of its electronic data base to other organizations at a high price and, under the agreements, prohibits the re-release of that data.

"I think what NLM is doing is a dangerous precedent," he said [NLM director Lindberg later pointed out that NLM revenues are returned directly to the Treasury].

Gellman said that because the copyright laws exempt government information—which means the information has no proprietary value—it would be inappropriate "to finance a system of user fees." He said the Securities and Exchange Commission followed the right course in deciding to seek public funding for parts of EDGAR it needs for its own administrative use. Computer systems "are expensive and agencies are looking for revenue sources," he said. "Funds are hard to get from Congress these days."

Gellman criticized the Patent and Trademark Office for entering into an exclusive

arrangement with the private sector that restricted public access to agency information. "The pressures of the budget are forcing agencies to do things that are not a good idea," he said. The PTO had a "warped sense of priorities" in putting financing concerns in front of maintaining public access to its data, he added.

Another issue for the subcommittee, he said, was whether government agencies are, in fact, competing with the private sector.

He noted that the SEC is requiring its EDGAR contractor to make data available to other private firms at the wholesale cost. The Department of Agriculture selected its computer contractor to serve solely as a wholesaler to private vendors. That allows those firms the chance to enhance the information and sell it on the open market. Each agency's approach is "a way of dealing with unfair competition questions."

But when it comes to electronic mail – a service now offered by private companies – "I'm not sure that's the kind of service an agency should offer."

Gellman also had some advice for agencies thinking of going to electronic information systems: involve all parties from the outset. "Announce your plans, actively seek out people who will be affected by the system, don't wait for these people to find you, don't go along and plan your system for two or three years and then expect to spring it on somebody."

He said that one of the things agencies should avoid is the type of fight the SEC has had with Michigan Congressman John Dingell, Chairman of the House Committee on Energy and Commerce, who believes the SEC needs congressional approval to implement EDGAR, "and there's a clear and glaring dispute over this point," said Gellman.

He also advised users of an agency's information to stay vigilant. "Keep an eye on the agency, be aggressive, insist on being in-

volved in the planning," he said. "Users can't sit back and wait for the agency to come to them."

Information Industry Concerns

The audience had heard the viewpoints of various government officials during the day, but the last two speakers at the forum represented different users of information.

The first speaker was David Y. Peyton, Director of Government Relations for the Information Industry Association. The IIA was founded in 1968 and today represents 400 firms whose business is information. Many of them provide specialized computer data bases often developed by statistics and other information provided by the government.

Peyton said his group strongly favors the move to automating government agencies but said a series of safeguards must be adopted to make sure it is done openly and fairly.

In examining what it wants from an electronic information system, a government agency should also take into account what private users of that data need or want. Peyton hailed the OMB circular as a "landmark achievement" and noted that one of its principles is to avoid government duplication of information services available in the private sector. Before seeking bids for a computer system, he said, a government agency should find out whether the information services it needs already exist. "Compare that with what its own requirements are and figure out how to meld the two together."

He said the government should "maintain a level playing field" between a firm that is managing an agency's data base and other companies that want to acquire that information, enhance it, and sell the "value-added" information. One approach, he said, would be to specify contractually the terms under which a vendor to the agency could function as a retailer of value-added data at the same time as other, outside firms.

Electronic filing systems cost "tens of millions of dollars," Peyton said, and the government should devise a policy on how they are financed. The funds for a system should come from all its beneficiaries – from filing fees, increased agency appropriations, and user fees – while the type of controversial barter arrangements used by the SEC and the PTO should be limited, he said.

If there are to be exchange agreements in which a company gets marketing rights in return for creating an electronic file, those arrangements should be ratified by Congress and with the understanding that they will supplement, not replace, congressional funding. In addition, the agency should not take advantage of the contractor, and there should be no attempts to exclude electronic information from the FOI Act.

Agencies also must be careful to avoid conflicts or apparent conflicts of interest for companies selected to develop and manage electronic files, warned Peyton. He cited as an example the SEC's use of the firm Arthur Andersen, which also acts as an auditing company for corporations who must file financial statements with the SEC.

Among other steps the government should take, Peyton said, is to certify electronic files as official records, seek advice on systems management from the users, and establish an umbrella policy for all the systems. Finally, he said, the government should employ technological advances as they become available.

Information Users Concerns

The final speaker was Eileen D. Cooke, Director of the American Library Association's Washington office. Smith, in introducing her, said Cooke's leadership over the years has cemented strong bonds between Congress, educators and librarians across the country.

Cooke said budget cuts and increased costs are affecting basic library services.

Libraries were suffering from double-digit inflation long before the rest of the country was. Also, libraries may not have the resources to buy the computer equipment to disseminate electronic information. Further, the view that government-held information is a commodity to be sold stands as a hurdle to an 'informed electorate.'

"Is there some reason they leave users to the last?" she chided, noting her appearance as the last speaker of the day.

Much of her address dwelt on the effects of budget austerity measures on libraries and their users. The pressures of cost cutting are not only reducing basic services, she said, but giving weight to the argument that information is something that must be purchased.

Free mailing for the blind and the handicapped, as well as inter-library loan rates, are again in jeopardy, slated for elimination in the Fiscal Year 1987 budget. Also, non-profit groups that rely on the mail to get their word out are facing increased postage costs. "Although postal rates seem very pedestrian when we talk about electronic filing, they still constitute a very important factor in traditional library services," she said.

Cooke said that it is important to tell Congress and others about the fundamental problems facing libraries and to establish a dialogue with all sides. The 4.3 percent preliminary round of cuts under the Gramm-Rudman-Hollings budget reductions are bad enough, but $33 million in library grants was due for recision in 1986 and by the start of FY '87 another 25 percent cut is scheduled. "It is going to be brutal," she said.

She told the audience that "we can all identify with the $18 million reduction imposed by the initial round of cuts on the Library of Congress. And at the same time as funding cuts are being made, libraries are seeing expenses increase; both telecommunication and postage costs are on the rise, she said.

When AT&T was divesting, it proposed increasing rates for telephone links between libraries by 73 percent. After an arduous lobbying effort, the increase was limited to 20 percent. But there have been two rate increases since then, adding up to a total of 40 percent. In addition, if Congress approves the FY '87 budget proposal to eliminate funds to pay for postal subsidies, fourth-class library rates would go to the ninety-four cent commercial rate—100 percent over the 1984 rate of forty-seven cents. "In a private sector library, they pass [cost increases] on to the customer; our customer is the taxpayer," she said.

Another strain on library budgets is increased mailing fees for books. Raising the rate just a few cents for each book can translate into "tens of thousands" of dollars in increased costs, she said.

Another source of concern is the rising cost of public documents, she noted, referring to the 300 percent increase in the cost of the *Federal Register*. "Many people stopped buying it" and turned to their local libraries for it, she said. But many library branches "can't afford that either."

Electronically stored information may be useful, but "will libraries have the wherewithal to purchase the equipment to take advantage of all this technology?" she asked.

Turning to the private sector to produce information raises several fundamental concerns for librarians, she said, including whether the country is selling its "birthright to help fill the deficit gulch."

Among the fears, she added, is the effect of privatizing information on copyright law and the Freedom of Information Act. In addition, private information providers may have conflicts of interest, she said. If oil companies were to take over Landsat, for example, would they release satellite information that showed possible oil fields to their competitors?

Cooke argued that few library users are aware of the details of OMB Circular A–130 and that librarians should study the document and let people know about its provisions. "You may take for granted that everybody knows about this, but they don't."

She concluded by telling the forum that OMB's need to cut the budget must be weighed against a broader objective. "Are we going to weigh the cost of information access on the marketplace scales of the Office of Management and Budget or on the scales of justice and equality? What price can we put on an informed electorate and democracy?" she asked in a poignant reminder of what the day's forum was all about.